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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,098	12/02/2003	Xing Wen Luo	USP2260A-YWL	1751
30265	7590	08/25/2005	EXAMINER	
RAYMOND Y. CHAN 108 N. YNEZ AVE., SUITE 128 MONTEREY PARK, CA 91754			COCKS, JOSIAH C	
			ART UNIT	PAPER NUMBER
			3749	

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/725,098	<b>Applicant(s)</b> LUO, XING WEN	
	<b>Examiner</b> Josiah Cocks	<b>Art Unit</b> 3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2003.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Drawings*

1. The drawings filed 12/02/03 are accepted by the examiner.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 14, 15, 23-25, 29, 30, and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,220,853 to Luo ("Luo").

Luo discloses in Figures 1-4 an ignition unit as described in applicant's claims 14, 15, 23-25, 29, 30, and 35 including an ignition unit for a disposable childproof lighter which comprises two supporting walls and a flint supported by a resilient element at a position between said two supporting walls, wherein said ignition unit, which is adapted for rotatably mounting between said two supporting walls (see Fig. 1), a striker wheel (231) having a plurality of striking teeth evenly provided on an outer circumferential surface thereof for urging against said flint; a pair of driven gear elements (30) for coaxially mounting said striker wheel between said two supporting walls, wherein each of said driven gear elements comprises a gear wheel having an outer circumferential surface and a support shank (32) integrally and coaxially protruded from an inner side of said gear wheel, wherein said two support

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shanks, which are smaller than said two gear wheels in diameter, are coaxially mounted on two sides of said striker wheel to define two supporting gaps between said two sides of said striker wheel and said two gear wheels respectively, and said two gear wheels are arranged for respectively and rotatably mounting to said two supporting walls in such a manner that said striker wheel is capable of being driven to rotate when said two gear wheels are driven to rotate (see col. 5, lines 43-61 and Fig. 1).

Luo further discloses two driving units, both free rotating until a downward force is applied (see Figs. 4A and 4B). Each driving cap comprising a driving ring (42) and an inner sidewall extending from a circular edge of said driving ring, an inner circumferential surface, and a circular driving cavity formed within said driving ring and said inner sidewall, each of said driving cavities having a diameter larger than that of said gear wheels of said driven gear elements, wherein each of said inner sidewalls has a central support hole for said support shank of said respective driven gear element passing through while said respective gear wheel is received in said driving cavity, wherein said two inner sidewalls of said driving caps are disposed said two supporting gaps respectively so as to hold said two driving caps in a position between said striker wheel and said two driven gear elements respectively, wherein said driving caps are arranged to engage with said gear wheels to drive said driven gear elements to rotate respectively, so as to drive said striker wheel to rotate for striking against said flint to produce sparks (see col. 3, lines 1-24 and Fig. 1).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-13, 16-22, 26-28, 31-34, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luo as applied to the claims above and further in view of U.S. Patent No. 5,769,625 to Sher ("Sher '625") and U.S. Patent Application Publication No. 2003/0108836 to Fisher ("Fisher").

Luo discloses in Figures 1-4 an ignition unit substantially as described in applicant's claims 1-13, 16-22, 26-28, 31-34, and 36 but does not disclose that one of the driving caps is fixed and normally engaged with the driven gear element (In Luo both spin freely until a downward force is applied). Luo also does not disclose that the driving rings of the driving caps have smooth outer circumferential slipping surfaces that are rounded with a thickness that gradually reduces from a mid-portion to the outer edges or that the driving caps are normally engaged with the gear wheels.

Sher '625 teaches an ignition unit in the same field of endeavor as Luo. In Sher '625, the ignition unit includes driving rings (722) that have smooth annular outer circumferential slipping surfaces (722A) (see Fig. 10 and col. 4, lines 41-44). The smooth slipping surfaces of Sher '625 function for the identical purpose of providing child resistance as the rounded surfaces with a thickness that gradually reduces from a mid-portion to the outer edges, and Figures 5-15 of Sher'

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625 appears to show some degree of reduction in thickness between the midpoint of the surfaces (722) and the edges of sides (720) (see specifically Figs. 5 and 6 and the apparent sloping/slanted portion between surface 722 and side 720). Therefore, as far as is proper, the examiner considers that the smooth slipping surfaces disclosed in Sher '625 are the equivalent of the rounded slipping surfaces recited in applicant's claims.

Fisher teaches an ignition unit in the same field of endeavor as Luo. In Fisher, the ignition unit includes a spark wheel (66) and two driving caps/disks (68 and 70). Although the driving cap/disk (70) does not have the child protection feature of requiring a downward force to engage, the cap is described as being able to spin freely to provide a child safety feature (see col. 2, paragraph [0029]) and is considered to be similar in function to each of the freely spinning wheels present in Luo. Driving cap/disk (68) is a single unit that is fixedly attached to spark disk (66) in order to rotate the spark disk to produce sparks for ignition (see page 2, paragraph [0025]). The presence of one fixed driving cap and one freely rotating cap provide an assembly that desirably contributes towards providing a child safety feature in a lighter (see Fisher, pages 2-3 paragraph [0030]).

In regard to the limitation that the fixed driving cap is normally engaged with the gear wheels in a manner that when the driving cap is intentionally rotated the driven gear elements and striker wheel are driven to rotate, the examiner considers this limitation is not patentably distinct from the fixed driving cap of Fisher. The presence of driving cap that has a outer circumferential driving ring portion and an inner circumferential surface is to provide a child safety feature in requiring that a downward force is first applied to the driving cap in order to engage a gear element to turn the spark wheel. This assembly is illustrated by both of the freely

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spinning wheels (40) in Luo. In reciting that the fixed driving cap is “normally engaged” with the driven gear element, applicant is indicating that an outer surface of the driven gear element is arranged to fixedly contact the inner surface of the driving ring so that both of these elements will turn in unison when a rotational force is applied. Thus, this driving cap assembly does not employ the child safety feature of requiring a downward force as discussed above. Therefore, applicant’s recitation of “normally engaging” is considered to be the obvious structural equivalent of a driving cap structure that is either fixed or integral to the mechanisms for turning the striker wheel that does not include this child safety feature.

An example of an integral relationship is shown Fisher, in which driving cap (68) is a single integrated unit that is fixedly attached to spark disk (66) in order to rotate the spark disk to produce sparks for ignition (the examiner notes that such a relationship is also shown in Sher ‘625 in which both of the driving caps directly engage the striker wheel (see Fig. 5). It has been held that the elimination of an element and its function is obvious when the function is not desired. See MPEP § 2144.04 (II)(A). Therefore, the examiner considers that a person of ordinary skill in the art would consider a driving cap and a gear wheel that are “normally engaged” to be obvious if the child safety feature providing from having this structure not normally engaged is not desired.

Therefore, in regard to claims 1-13, 16-22, 26-28, 31-34, and 36, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the driving rings of Luo to incorporate the smooth surfaces of Sher ‘625 as these smooth surfaces desirably require that a user must press her or her thumb harder against the rings in order to establish sufficient gripping friction between the thumb and the striker wheel that is within the

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range of an adult but not that of a child, thus desirably rendering the lighter child resistant (see Sher '625, col. 4, lines 46-55 and col. 5, lines 19-31). Further, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify one of the freely spinning caps of Luo to incorporate a fixed cap as taught in Fisher as the combination of one fixed cap and one freely rotating cap in the lighter art is recognized in the art to provide the child resistance feature of causing a child's thumb to slip off the freely spinning disk to hamper the ability to light the lighter with the intent of causing the child to eventually lose interest in operating the lighter (see Fisher, pages 2-3 paragraph [0030]).

### *Double Patenting*

6. Claims 14, 15, 23-25, 29, 30, and 35 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 21-40 of copending Application No. 10/400,143. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of this application, though broader in scope, are claiming the same invention as that of claims 21-40 of Application No. 10/400,143.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### *Conclusion*

7. This action is made non-final. A THREE (3) MONTH shortened statutory period for reply has been set. Extensions of time may be available under the provisions of 37 CFR



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1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patents to Sher ('429), Feng et al., Shimizu, Kai Man, and WO 98/04869 are cited to further show the state of the art concerning lighters and including the child safety feature of a freely rotating driving wheel requiring a downward force to operate.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Josiah Cocks whose telephone number is (571) 272-4874. The examiner can normally be reached on weekdays from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Monica Carter, can be reached at (571) 272-4475. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://portal.uspto.gov/external/portal/pair>. Any questions on access to the Private PAIR system should be directed to the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

jcc  
August 19, 2005



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PRIMARY EXAMINER  
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